

CLAIMS:

1. A device for fastener-free connection comprising: a first object; a second object; and at least one insert made from a heat-shrinkable material installed between said first object and said second object, said at least one insert having two opposite sides; said heat-shrinkable material being thermally shrinkable in a direction that provides movement of said first object and said second object towards each other during shrinking; said at least one insert being attached to said opposite sides by connection means; and at least one additional object located in a space between said first object and said second object; said heat-shrinkable material being capable of shrinking only in one direction.

2. The device of Claim 1, wherein said at least one additional object is an adhesive material in an amount sufficient to provide an adhesive connection between said first object and said second object after shrinkage of said at least one insert.

3. The device of Claim 1, wherein said at least one additional object is an object that requires removal of heat.

4. The device of Claim 3, wherein said at least one additional object is an electronic device.

5. The device according to Claim 1, wherein one of said first object and said second object comprises support means, while the other of said first object and said second object comprises a heatsink unit; said at least one additional object being supported by said support means and may be heated and require removal of heat when heated; said at least one additional object having a first contact surface and a height from said support means to said first contact surface; said heat-sink having a second contact surface in a heat-transmitting engagement with said first contact surface of said at least one additional object for removal of heat therefrom via said heat-transmitting

engagement; said spacer having a height that exceeds a height from said support means to said first contact surface, said spacer having a degree and direction of shrinking, at least in the direction of said height of said at least one additional object, that maintain said heat-sink unit and said at least one additional object in said heat-transmitting engagement when said spacer has been shrunk.

6. The device according to Claim 2, wherein said connection means are adhesive connections.

7. The device according to Claim 1, wherein said heat-shrinkable material is a heat-shrinkable plastic selected from the group consisting of a radiation cross-linked heat-shrinkable polyolefin and a heat-shrinkable fluorocarbon-based material.

8. The device according to Claim 5, wherein said heat-shrinkable material is a heat-shrinkable plastic selected from the group consisting of a radiation cross-linked heat-shrinkable polyolefin and a heat-shrinkable fluorocarbon-based material.

9. The device according to Claim 6, wherein said heat-shrinkable material is a heat-shrinkable plastic selected from the group consisting of a radiation cross-linked heat-shrinkable polyolefin and a heat-shrinkable fluorocarbon-based material.

10. The device according to Claim 1, wherein said spacer is made in the form selected from a solid block and a hollow body.

11. The device according to Claim 3, wherein said spacer is made in the form selected from a solid block and a hollow body.

12. The device according to Claim 5, wherein said spacer is made in the form selected from a solid block and a hollow body.

13. The device according to Claim 5, wherein said connection means are adhesive connections.

14. The device according to Claim 4, wherein said support means is a printed circuit board, and wherein said electronic device is an electronic chip.

15. The device according to Claim 5, wherein said support means is a printed circuit board, and wherein said electronic device is an electronic chip.

16. The device according to Claim 15, where said heat-shrinkable material is a heat-shrinkable plastic selected from the group consisting of a radiation cross-linked heat-shrinkable polyolefin and a heat-shrinkable fluorocarbon-based material.

17. The device according to Claim 5, wherein said spacer is made from a heat-shrinkable electrically conductive material, said support means being grounded, said additional object generating electromagnetic radiation, said spacer being connected to said heatsink and to said support means through a conductive glue so that said heatsink is electrically connected to said support means via said spacer for suppressing electromagnetic interference from said additional object.

18. The device according to Claim 17, wherein said support means is a printed circuit board, and wherein said additional object is an electronic chip.

19. A method for fastener-free connection of parts comprising the steps of:

providing a first part and a second part that are to be connected to each other;

providing at least one spacer made of a heat-shrinkable material that is shrinkable only in one direction;

placing said at least one spacer between said first part and said second part so that said one direction is a direction of moving said first part and said second part towards each other ;

attaching said at least one spacer to said first part and said second part; and
heating said at least one spacer for causing said at least one spacer to shrink
and to move said first part and said second part towards each other.

20. The method of Claim 19, further providing a step of filling a space between said first part and said second part with an adhesive material prior to said step of heating.

21. The method of Claim 19, further providing a step of attaching at least one object to one of said first part and said second part, said at least one spacer having a height, said at least one object having a height, said height of said at least one spacer being greater than the height of said at least one object by an amount that is smaller than the amount of shrinkage of said at least one spacer under effect of said step of heating so that shrinking of said at least one object brings said first part and said second part into contact with a pressure.

22. The method of Claim 21, wherein said at least one object is an object that requires removal of heat and wherein one of said first part and said second part is a heatsink for removal of heat from said at least one object, while the other of said first part and said second part is a printed circuit board, said at least one object being an electronic device.

23. The method of Claim 22, comprising a steps of:

grounding said printed circuit board;
making said at least one spacer from a conductive heat-shrinkable material; and
providing electrical connection between said heatsink and said printed circuit board through said a least one spacer.